WHAT IS CLAIMED:

1. A stent apparatus comprising:

a substantially tubular member with an inside surface and an outside surface; and,

securing element for securing the tubular member to the exterior of a body lumen.

2. A stent as in claim 1 wherein:

the tubular member has an inner diameter greater than the exterior diameter of the lumen.

3. A stent as in claim 1 wherein:

the tubular member comprises biologically inert material.

4. A stent as in claim 3 wherein:

the inert material is a shape-memory material.

5. A stent as in claim 3 wherein:

the inert material is PTFE.

6. A stent as in claim 3 wherein:

the inert material is Dacron.

7. A stent as in claim 3 wherein:

the tubular member further comprises a biologically active material.

8. A stent as in claim 7 wherein:

the active material is a drug-releasing coating on a surface of the stent that permits timed or prolonged pharmacological activity.

9. A stent as in claim 1 wherein:

the tubular member comprises resorbable material.

10. A stent as in claim 9 wherein:

the tubular member further comprises a biologically active material.

11. A stent as in claim 10 wherein:

the tubular member is shape-memory material.

12. A stent as in claim 1 wherein:

the tubular member is porous for providing nutrients or irrigation to the lumen.

13. A stent as in claim 1 wherein:

the tubular member comprises a braided material.

14. A stent as in claim 1 wherein:

the tubular member is a single unified member.

15. A stent as in claim 1 wherein:

the tubular member comprises at least two members flexibly joined together.

16. A stent as in claim 15 wherein:

the members are joined by a hinge.

17. A stent as in claim 1 wherein:

the tubular member is bifurcated.

18. A stent as in claim 1 wherein:

the tubular member comprises a radioactive element for delivering radiation directly to the lumen.

19. A stent as in claim 18 wherein:

the tubular member further comprises a biologically active material.

20. A stent as in claim 1 wherein:

the securing element is a barb.

21. A stent as in claim 1 wherein:

the securing element is a hook.

22. A stent as in claim 1 wherein:

the securing element is an adhesive.

23. A stent as in claim 22 wherein:

the adhesive is biologically inert.

24. A stent as in claim 22 wherein:

the adhesive requires curing.

25. A stent as in claim 1 wherein:

the securing element is a suture.

26. A stent as in claim 1 wherein:

the securing element are locks that close the stent tightly onto the lumen to prevent it from slipping but not to restrict the lumen.

27. A stent as in claim 1 wherein:

the tubular member covers less than the entire circumference of the lumen.

28. A stent as in claim I further comprising:

a reinforcing layer for strengthening the tubular member.

29. A stent as in claim 28 wherein:

the reinforcing layer comprises a braided material.

30. A method of supporting a body lumen comprising:

placing a support around the exterior of a body lumen; and,

securing the support to the lumen.

31. A method of support as in claim 30 wherein:

the support covers less than the total circumference of the lumen.

32. A method of support as in claim 3 0 wherein:

the support comprises a biologically inert material.

33. A method of support as in claim 32 wherein:

the support further comprises a shape-memory material.

34. A method of support as in claim 30 wherein:

the support comprises a biologically active material.

35. A method of support as in claim 30 wherein:

the support comprises resorbable material.

36. A method of support as in claim 30 wherein:

the support comprises a radioactive element for delivering radiation directly to the lumen.

37. A method as in claim 30 wherein:

the support is porous.

38. A method of support as in claim 30 wherein:

the support is a single unified member.

39. A method of support as in claim 30 wherein:

the support comprises at least two members flexibly joined together.

40. A method of support as in claim 30 wherein:

the support is bifurcated.

41. A method of support as in claim 30 wherein:

the support is secured by a barb.

42. A method of support as in claim 30 wherein:

the support is secured by a hook.

43. A method of support as in claim 30 wherein:

the support is secured by an adhesive.

44. A method of support as in claim 30 wherein:

the support comprises a braided material.

45. A method of support as in claim 30 wherein:

the support is substantially composed of resorbable material.

46. A method of support as in claim 30 wherein:

the support is porous.

47. A method of support as in claim 30 wherein:

the support comprises at least two members flexibly joined together.

48. A method of support as in claim 30 wherein:

the support is secured by sutures.

49. A method of support as in claim 30 wherein:

the support locks onto the lumen to prevent it from slipping.

50. A method of support as in claim 30 further comprising:

a reinforcing layer for strengthening the support.

51. A method for implanting a prosthesis to the exterior of a body lumen comprising:

providing for a stent as described in claim 1;

inserting the stent around a desired location on the exterior of the lumen;

providing for controllable contraction of the prosthesis at the desired location by exerting a force upon the prosthesis to deform it such that it contacts the lumen sufficiently to secure it to the lumen.

52. A method for implanting a prosthesis to the exterior of a body lumen comprising:

providing for a stent as described in claim 1;

inserting the, stent around a desired location on the exterior of the lumen;

providing for controlled expansion of the lumen such that it contacts the stent sufficiently to secure it to the lumen.